

Churn Analytics

Wireframe

Dashboard

Customers Churn Analysis

95.38%
Churning Rate

Churned Customers Count



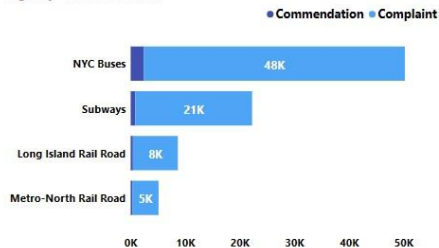
Year

2014	2016
2015	2017

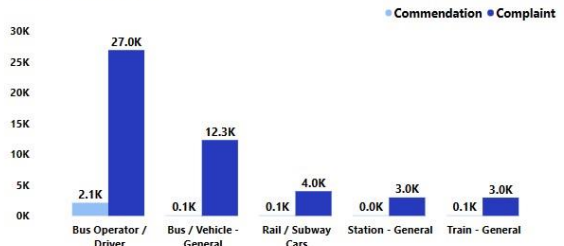
Quarter

1	3
2	4

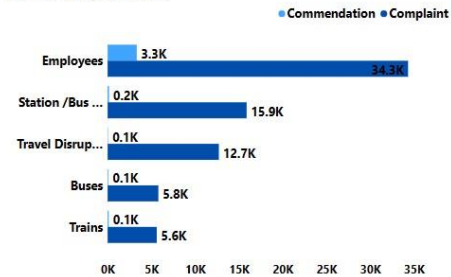
Agency-wise Feedbacks



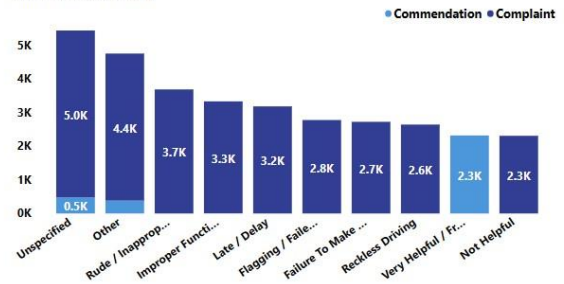
Common Subject Details



Common Subject Matters

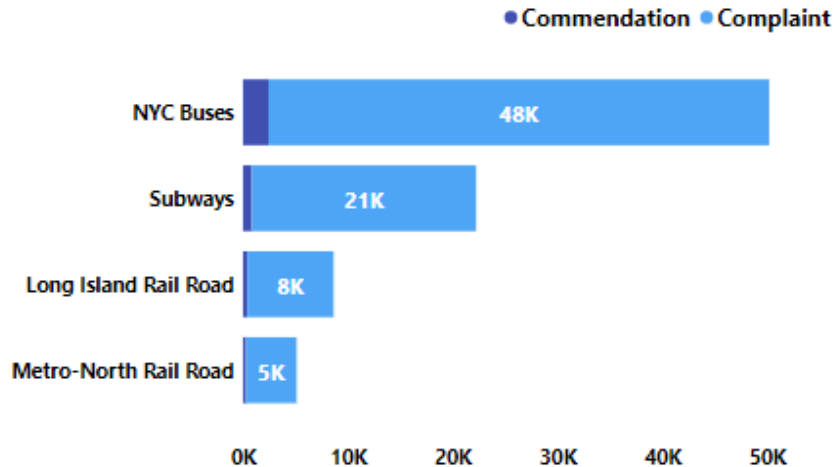


Common Issue Details



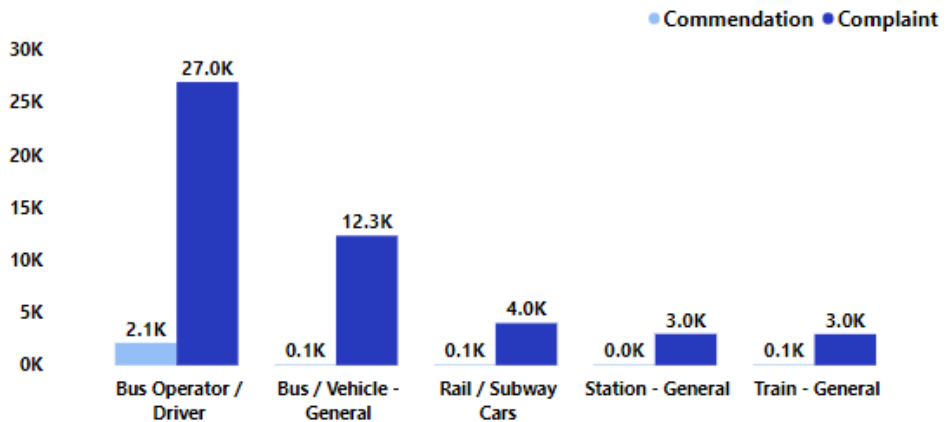
1. Agency-wise Feedbacks:

Agency-wise Feedbacks



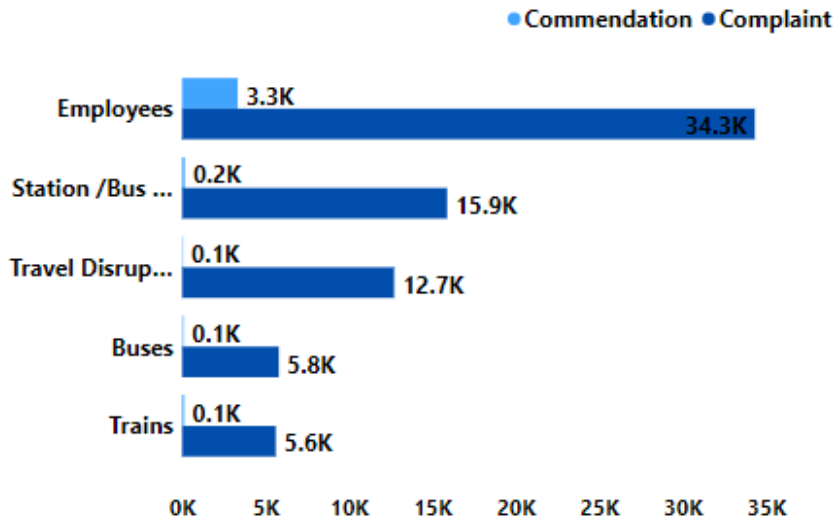
2. Common Subject Details:

Common Subject Details



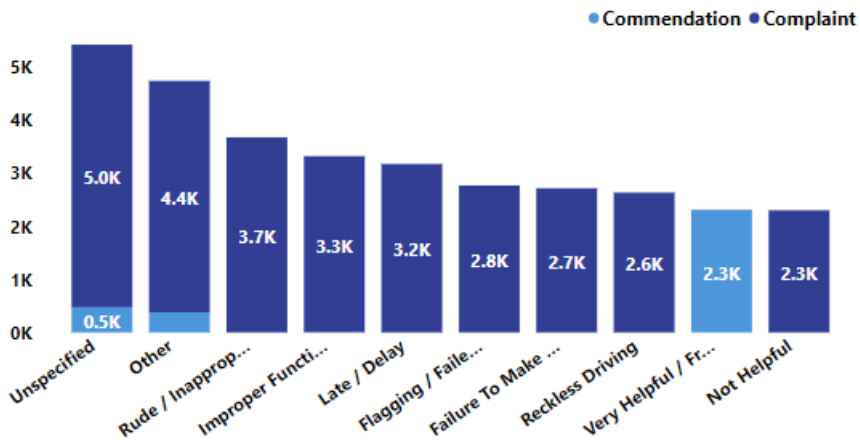
3. Common Subject Matters:

Common Subject Matters

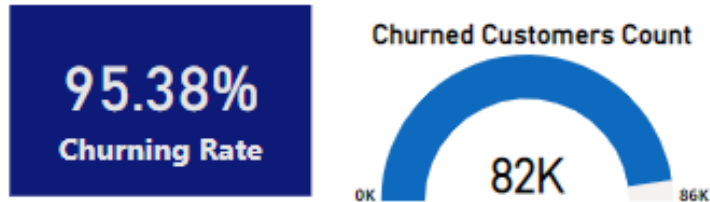


4. Common Issue Details:

Common Issue Details



5. Different Metrics:



6. Different Slicers:

Year		Quarter	
2014	2016	1	3
2015	2017	2	4

7. SQL Queries:

```
-- Data Cleaning
-- Handling null values in the Issue Detail Column
UPDATE data
SET Issue_Detail = CASE WHEN Issue_Detail = '' THEN 'Unspecified' ELSE Issue_Detail END;

SELECT * FROM data;
-- The null values have been handled.

-- Checking duplicate values
SELECT DISTINCT *
FROM data;
-- There are duplicate entries in the dataset which need to be removed.
```

```
DROP TABLE IF EXISTS copy_of_data;  
CREATE TABLE copy_of_data SELECT DISTINCT * FROM data;  
DROP TABLE data;  
ALTER TABLE copy_of_data RENAME TO data;  
  
SELECT * FROM data;  
-- The duplicate values have been removed. The dataset is cleaned now.
```

-- 1. How many retained customers are there?

```
SELECT COUNT(Feedback) AS Retained_Customers_Count  
FROM data
```

WHERE Feedback = "Commendation" ;

-- 3984 Customers out of 86215 Customers gave positive feedback for the services. It seems that the churning rate of customers is very high.

	Retained_Customers_Count
▶	3984

-- 2. What is the Churn Rate of the customers?

```
WITH Complaints_CTE AS (SELECT COUNT(Feedback) AS Number_of_Complaints FROM data WHERE Feedback = 'Complaint')  
SELECT CONCAT(ROUND((((Number_of_Complaints)*100/(SELECT COUNT(Feedback) FROM data)), 2), "%") AS Churning_Rate_of_Customers  
FROM Complaints_CTE;
```

-- The churning rate of customers is very high i.e. approximately 95.38%.

-- The company needs to focus highly on the quality of services it provides.

	Churning_Rate_of_Customers
▶	95.38%

-- 3. What is the count of the churned customers?

```
SELECT COUNT(Feedback) AS Churned_Customers_Count
FROM data
WHERE Feedback = "Complaint" ;
```

-- 82231 customers out of 86215 customers are churning customers.

-- The company is going to face a huge loss because of this, if not tackled immediately.

	Churned_Customers_Count
▶	82231

-- 4. Which agency has the largest number of complaints from the customers?

```
SELECT Agency, COUNT(Agency) AS Agency_Count
FROM data
WHERE Feedback = 'Complaint'
GROUP BY Agency
ORDER BY Agency_Count DESC;
```

-- The NYC Buses agency has the maximum number of complaints, followed by Subways.

-- These agencies are not providing good services to the customers.

	Agency	Agency_Count
▶	NYC Buses	47781
	Subways	21401
	Long Island Rail Road	8231
	Metro-North Railroad	4818



-- 5. What are the most common subject matters?

```
SELECT Subject_Matter, COUNT(*) AS Count_of_Customers
FROM data
WHERE Feedback = 'Complaint'
GROUP BY Subject_Matter
ORDER BY Count_of_Customers DESC;
```

-- Mostly customers are disappointed with the Employees and Station/Bus Stop/Facility/structure services.

-- These need to be tackled in order to decrease the churning rate of customers.

	Subject_Matter	Count_of_Customers
▶	Employees	34314
	Station /Bus Stop /Facility /Structure	15876
	Travel Disruption / Trip Problem	12704
	Buses	5795
	Trains	5613
	Telephone / Website / Mobile Apps	2258
	Policies, Rules & Regulations	2111
	Schedules / Reservations	1376
	MetroCard/Tickets/E-Zpass & Tolls	1346

-- 6. What are the most common subject details?

```
SELECT Subject_Detail, COUNT(*) AS Count_of_Customers
FROM data
WHERE Feedback = 'Complaint'
GROUP BY Subject_Detail
ORDER BY Count_of_Customers DESC;
```

-- Mostly customers face problems with the Bus Operator or Driver and Vehicles.

	Subject_Detail	Count_of_Customers
▶	Bus Operator / Driver	26957
	Bus / Vehicle - General	12335
	Rail / Subway Cars	4015
	Station - General	2994
	Train - General	2974
	Train Conductor	2453
	Platforms	2016
	Ticket Machines	1842
	No Value	1666


```
-- 7. What are the most common issue details?
```

```
SELECT Issue_Detail, COUNT(*) AS Count_of_Customers
FROM data
WHERE Feedback = 'Complaint'
GROUP BY Issue_Detail
ORDER BY Count_of_Customers DESC;
```

```
-- Specifically, the customers get bothered by the rude behavior or inappropriate language used by the drivers
-- and malfunctioning of the vehicles, other than the reasons unspecified.
-- The company should seriously take action against such drivers and
-- also repair the malfunctioned vehicles in order to increase the customer retention rate.
```

	Issue_Detail	Count_of_Customers
►	Unspecified	4963
	Other	4373
	Rude / Inappropriate Language	3689
	Improper Function/Needs Repair/Damaged	3329
	Late / Delay	3185
	Flagging / Failed To Stop	2779
	Failure To Make Scheduled Stop	2726
	Reckless Driving	2644
	Not Helpful	2310

```
-- 8. What is the year-wise trend of the customers?
```

```
SELECT Year, COUNT(*) AS Count_of_Customers
FROM data
GROUP BY Year
ORDER BY Year DESC;
```

```
-- It is clear that the customers are not liking the services since year 2015 as the number of customers starts decreasing since year 2015.
-- The number of customers drastically decreases in the year 2017.
-- The customers count in the year 2017 became even lesser than half of the count in the year 2016.
-- The maximum churning of customers has taken place in the year 2017.
```

	Year	Count_of_Customers
►	2017	9502
	2016	28302
	2015	35455
	2014	12956

-- 9. What is the quarter-wise trend of the customers?

```
SELECT Quarter, COUNT(*) AS Count_of_Customers
```

```
FROM data
```

```
WHERE Feedback = 'Complaint'
```

```
GROUP BY Quarter
```

```
ORDER BY Count_of_Customers DESC;
```

-- The maximum churning of customers has taken place in the 3rd and 4th quarters (approximately 25% in each quarter).

	Quarter	Count_of_Customers
▶	3	23814
	4	23705
	2	18176
	1	16536